

B37

## PATENT ABSTRACTS OF JAPAN

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(21)Application number : 06-281316 (71)Applicant : MOON STAR CO  
(22)Date of filing : 19. 10. 1994 (72)Inventor : SHIMODA TAKAAKI

## (54) STRUCTURE OF SHOE

## (57)Abstract:

PURPOSE: To provide shoes for preventing from being unhealthy by quickly discharging the water intruded when the shoes are used in a puddle in a rainfall or after a rainfall or are used at the waterside of the sea or a river, and at the same time by drying the inside thereof and by preventing the stuffiness of the inside of the shoes.

CONSTITUTION: A shoe is constituted in such a way that the inner liner 2 and the insole 3 thereof are provided with communicating holes 5 that have been communicated with the grooves 4 of a shoe bottom body 4, and openings communicated with the outside are provided to both the side-wall lower parts of the shoe bottom body 4, and further nylon meshes of moisture absorption and quick-drying properties are used bath on the rear surface of the instep cover 9 and on the surface of the inner liner 2.



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## LEGAL STATUS

[Date of request for examination]

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CLAIMS

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[Claim(s)]

[Claim 1] Structure of shoes (1) of having the wastewater function characterized by preparing the exterior and opening (7) open for free passage in the both sides of the side-attachment-wall lower part (6) of a sole body (4) while trepanning the free passage hole (5) which leads to a sole body (4) at the treading part and heel of an insole (2) and an insole (3) two or more.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Industrial Application] When this invention prepares two or more openings which open the interior and the exterior of shoes for free passage and they mainly carry out the object for \*\* at the waterside, such as the sea and a river, it discharges promptly the water which trespassed upon the interior of shoes, and relates to the shoes which can carry out the object for \*\* without displeasure.

[0002]

[Description of the Prior Art] When encountering the object for \*\*, and a puddle, or using shoes for a rainfall in consideration of the insurance of a guide peg by the leisure of the waterside, fishing, and kitchenwork conventionally and water invaded from \*\*\*\* of shoes, it was carrying out whether it would wait to make shoes take off and discharge or to carry out evaporation desiccation automatically.

Moreover, drill a hole in the upper insole sewn on an upper and one, prepare a notch in a part of insole inserted between this upper insole and \*\*\*\*, it is made open for free passage with the hole drilled in the upper insole, and there are the exterior and a thing which gave the hole open for free passage only in the inside section of the side-attachment-wall edge of \*\*\*\* further.

[0003] In addition, the thing in which the concave which uses an insole as the insole of the shape of thick sponge, establishes some concave pits in the rear face of this insole, carries out number drilling of the front face of an insole and the through-hole open for free passage suitably into this concave pit, and agrees in a concave pit, the exterior given to the tape part of a sole, and opening open for free passage was made to form. While forming the hole which is open for free passage from the tape section of shoes in the crevice established in the treading part, side edge opening and top-face opening which demount and are mutually open for free passage to a free attachment member in an aisleway are made to form, and there are shoes which an attachment member is inserted [ shoes ] in this crevice and make the water which invaded discharge outside. In addition, it is a thing similar to the structure of the above-mentioned publication, and many things to which the air hole opened the interior and the exterior of shoes for free passage are one of things aiming at not a thing but aeration aiming at wastewater.

[0004]

[Problem(s) to be Solved by the Invention] Generally, the interior of shoes has bad permeability and the sports shoes urged to especially sweating of a guide peg will be in dysphoria, like a guide peg is steamed and an insanitary condition. Especially, a rainfall, the puddle after a period after the rain, etc. are encountered, and if water trespasses upon the interior of shoes, water will not discharge easily. It is common to use sponge etc. to the thing which stuck the soft ground or urethane foam on the rear face of an upper and an insole, and an insole recently. According to them, the water which invaded is absorbed, it does not drain, and evaporation does not dry forever late.

[0005] In order to cancel these things, there is an approach indicated to the above-mentioned Prior art, and they demonstrate appropriate effectiveness. However, the quality of the material of an upper, an insole, an insole, a middle bottom, etc. and the structure about discharge of water are not enough, and the person for \*\* has come to be satisfied. This invention canceled these faults so that the water which

invaded might be discharged, evaporation and desiccation might be performed at an early stage and the person for \*\* could be satisfied.

[0006]

[Means for Solving the Problem] while trepanning the free passage hole which leads to a sole body at the treading part and heel of an insole and an insole two or more -- a sole body -- \*\*\*\*\* -- offer of shoes made water easy to discharge to the exterior which gave inclination in the direction of a right angle from the center toward the side-attachment-wall lower part of both sides to the longitudinal direction, and was established in the both sides of the side-attachment-wall lower part, and opening open for free passage at the same time it prepares \*\*\*\*.

[0007]

[Function] \*\*\*\*\* which is open for free passage on a sole body is prepared in an insole and an insole, and the water inside shoes discharges promptly by having given opening which leads to the side-attachment-wall lower part of the both sides of a sole body outside.

[0008]

[Example] Hereafter, the example of this invention is explained to a detail. Although it is an upper body (10) first, after giving through and a water-repellent finish to the processing agent layer which gave a water-repellent finish according the cheesecloth generally used for the upper (9) of shoes (1) as a front cloth, and this cheesecloth to printing to the water-repellent liquid of a fluorine system after DEII ping desiccation, the nylon mesh material which was excellent in hygroscopicity and a quick-drying one as backing cloth, and the ground which stuck Qu Gulan (trade name) are used. As an insole (3), this also sticks \*\*\*\* of 0.5 M/M extent on a rear face using the rubber sponge of thickness 3 M/M generally used. These are judged in each configuration. To the heel of an upper (9), a counter (11) is installed tentatively from outside, and heel decoration (12) is further sewn on with leather from on the. The free passage hole (5) of diameter 3 M/M is prepared in a treading part and a heel at an insole (3). In this example, it prepared in the treading part in the shape of a rhombus, and prepared in six pieces and a heel in the shape of [ four ] a square. This upper (9) and insole (3) were sewn on, and the upper body (10) was made.

[0009] On the other hand, press forming of the sole body (4) was carried out, and it prepared the design in the ground plane, made the inside which touches an upper body (10) bristle with the rib (13) of the V character mold for giving reinforcement and cushioning properties, and used between a V character mold and V character molds as the slot for wastewater (14), and has given inclination (15) in the direction of a right angle from the core in the shape of the spherical surface toward the outside to the longitudinal direction. Furthermore, since the tape section of shoes (1) was constituted, the perimeter of a sole body (4) established the side attachment wall, and it has prepared the long hole of opening (7) length 4 M/Mx width 8 M/M which opens a slot (14) and the exterior for free passage in this side-attachment-wall lower part (6) in the inside and every two outsides each.

[0010] Thus, the shoes (1) which stick the upper body (10) and sole body (4) which were made, and have a wastewater function are manufactured. The free passage hole (5) naturally prepared in the upper body (10) is open for free passage into the slot (14) established in the sole body (4). Furthermore as an insole (2), gap prevention (8) of EVA sponge is stuck too, making into a table the nylon mesh and Qu Gulan who used it for the backing cloth of an upper (9), and applying thickness 1.2 M/M of EVA to a flesh side from the heel at lamination and its rear face at non-\*. Then, the free passage hole (5) of diameter 1.5 M/M for wastewater is broken on the heel in ten pieces and 20 treading parts. What is necessary is this time, just to change suitably the number and magnitude of a hole which were given to the insole (2), the insole (3), and the sole body (4) depending on a situation, respectively, although written clearly.

[0011]

[Effect] When water trespassed upon the interior of shoes conventionally, prompt discharge was difficult, but the free passage hole which is open for free passage on a sole body is prepared in the insole of this invention, and an insole, and while giving opening which is outside well-informed about a sole body further, since inclination is established on the spherical surface toward opening, it drains promptly.

Furthermore, since opening is prepared in the both sides of the side-attachment-wall lower part, it drains from pronation of a guide peg, and opening of right and left by the supination in the case of a walk. Moreover, since the water which the upper is given a water-repellent finish, had prevented the permeate lump of the water from a front face, and invaded from \*\*\*\*\* and a bottom absorbs water with the good backing cloth of absorptivity and is excellent in quick-drying, its desiccation is early. Therefore, the object for \*\* is carried out at resorts, such as the sea and a river, and even if water enters a little, the object for \*\* can be carried out in comfort.

[0012] Moreover, since permeability is good in the case for the usual \*\*, it prevents that press down sweating of a guide peg and a guide peg is steamed. There is also no offensive odor inside shoes depended for steaming, and there is effectiveness which is useful also to prevention of athlete's foot etc. and can cancel dysphoria and an insanitary condition.

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TECHNICAL FIELD

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[Industrial Application] When this invention prepares two or more openings which open the interior and the exterior of shoes for free passage and they mainly carry out the object for \*\* at the waterside, such as the sea and a river, it discharges promptly the water which trespassed upon the interior of shoes, and relates to the shoes which can carry out the object for \*\* without displeasure.

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PRIOR ART

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[Description of the Prior Art] When encountering the object for \*\*, and a puddle, or using shoes for a rainfall in consideration of the insurance of a guide peg by the leisure of the waterside, fishing, and kitchenwork conventionally and water invaded from \*\*\*\* of shoes, it was carrying out whether it would wait to make shoes take off and discharge or to carry out evaporation desiccation automatically. Moreover, drill a hole in the upper insole sewn on an upper and one, prepare a notch in a part of insole inserted between this upper insole and \*\*\*\*, it is made open for free passage with the hole drilled in the upper insole, and there are the exterior and a thing which gave the hole open for free passage only in the inside section of the side-attachment-wall edge of \*\*\*\* further.

[0003] In addition, the thing in which the concave which uses an insole as the insole of the shape of thick sponge, establishes some concave pits in the rear face of this insole, carries out number drilling of the front face of an insole and the through-hole open for free passage suitably into this concave pit, and agrees in a concave pit, the exterior given to the tape part of a sole, and opening open for free passage was made to form. While forming the hole which is open for free passage from the tape section of shoes in the crevice established in the treading part, side edge opening and top-face opening which demount and are mutually open for free passage to a free attachment member in an aisleway are made to form, and there are shoes which an attachment member is inserted [ shoes ] in this crevice and make the water which invaded discharge outside. In addition, it is a thing similar to the structure of the above-mentioned publication, and many things to which the air hole opened the interior and the exterior of shoes for free passage are one of things aiming at not a thing but aeration aiming at wastewater.

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EFFECT OF THE INVENTION

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[Effect] When water trespassed upon the interior of shoes conventionally, prompt discharge was difficult, but the free passage hole which is open for free passage on a sole body is prepared in the insole of this invention, and an insole, and while giving opening which is outside well-informed about a sole body further, since inclination is established on the spherical surface toward opening, it drains promptly. Furthermore, since opening is prepared in the both sides of the side-attachment-wall lower part, it drains from pronation of a guide peg, and opening of right and left by the supination in the case of a walk. Moreover, since the water which the upper is given a water-repellent finish, had prevented the permeate lump of the water from a front face, and invaded from \*\*\*\*\* and a bottom absorbs water with the good backing cloth of absorptivity and is excellent in quick-drying, its desiccation is early. Therefore, the object for \*\* is carried out at resorts, such as the sea and a river, and even if water enters a little, the object for \*\* can be carried out in comfort.

[0012] Moreover, since permeability is good in the case for the usual \*\*, it prevents that press down sweating of a guide peg and a guide peg is steamed. There is also no offensive odor inside shoes depended for steaming, and there is effectiveness which is useful also to prevention of athlete's foot etc. and can cancel dysphoria and an insanitary condition.

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TECHNICAL PROBLEM

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[Problem(s) to be Solved by the Invention] Generally, the interior of shoes has bad permeability and the sports shoes urged to especially sweating of a guide peg will be in dysphoria, like a guide peg is steamed and an insanitary condition. Especially, a rainfall, the puddle after a period after the rain, etc. are encountered, and if water trespasses upon the interior of shoes, water will not discharge easily. It is common to use sponge etc. to the thing which stuck the soft ground or urethane foam on the rear face of an upper and an insole, and an insole recently. According to them, the water which invaded is absorbed, it does not drain, and evaporation does not dry forever late.

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MEANS

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OPERATION

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[Function] \*\*\*\*\* which is open for free passage on a sole body is prepared in an insole and an insole, and the water inside shoes discharges promptly by having given opening which leads to the side-attachment-wall lower part of the both sides of a sole body outside.

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EXAMPLE

[Example] Hereafter, the example of this invention is explained in detail. Although it is an upper body (10) first, after giving through and a water-repellent finish to the processing agent layer which gave a water-repellent finish according to the cheesecloth generally used for the upper (9) of shoes (1) as a front cloth, and this cheesecloth to printing to the water-repellent liquid of a fluorine system after DEII ping desiccation, the nylon mesh material which was excellent in hygroscopicity and a quick-drying one as backing cloth, and the ground which stuck Qu Gulan (trade name) are used. As an insole (3), this also sticks \*\*\*\* of 0.5 M/M extent on a rear face using the rubber sponge of thickness 3 M/M generally used. These are judged in each configuration. To the heel of an upper (9), a counter (11) is installed tentatively from outside, and heel decoration (12) is further sewn on with leather from on the. The free passage hole (5) of diameter 3 M/M is prepared in a treading part and a heel at an insole (3). In this example, it prepared in the treading part in the shape of a rhombus, and prepared in six pieces and a heel in the shape of [ four ] a square. This upper (9) and insole (3) were sewn on, and the upper body (10) was made.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] The central cross-section perspective view of the shoes of this invention.

[Drawing 2] The central cross-section perspective view of the sole body of this invention.

[Drawing 3] Drawing showing the horizontal end face of a sole body

[Description of Notations]

- 1 Shoes
- 2 Insole
- 3 Insole
- 4 Sole Body
- 5 Free Passage Hole
- 6 Side-Attachment-Wall Lower Part
- 7 Opening
- 8 Gap Prevention
- 9 Upper
- 10 Upper Body
11. Counter
12. Heel Decoration
13. Rib
14. Slot
- 15 Inclination

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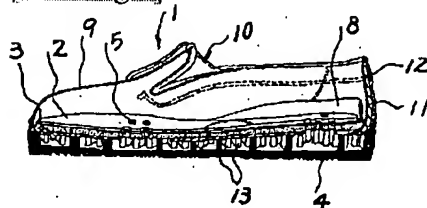
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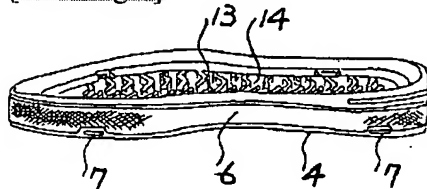
DRAWINGS

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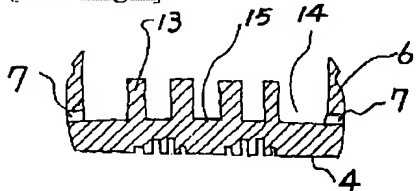
[Drawing 1]



[Drawing 2]



[Drawing 3]



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